

Is AI the new Railroad?



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In times where US railroad is consolidating, what investment opportunities does AI bring?

- AI infrastructure: Companies building the backbone of AI, such as NVIDIA (chips), AMD,

and high-performance server providers, are at the heart of this investment surge.

- Data centers & energy: The massive demand for computing power is fueling growth in data center operators, cloud providers, and energy companies, especially those investing in nuclear and renewables.
- AI-driven industries: Beyond tech, sectors like robotics, autonomous vehicles, healthcare AI, and industrial automation are poised to benefit as AI adoption accelerates globally.

Artificial intelligence (AI) is rapidly evolving from a niche technology to the backbone of global economic growth, with unprecedented levels of investment flowing into infrastructure, chips, energy, and cloud computing. US tech giants alone are committing hundreds of billions of dollars to AI, eclipsing long-term pledges in Europe and signaling a sustained, large-scale transformation.

The railroad boom of the 19th century transformed economies by

connecting markets, enabling mass distribution of goods, and driving industrial expansion. At its peak in the US, railroad construction consumed around 5% of GDP¹, representing one of the largest infrastructure buildouts in history. This investment reshaped trade, accelerated urbanization, and created entirely new industries such as steel, coal, and logistics.

Artificial intelligence today is often compared to that transformative era but on a potentially larger scale. Analysts estimate global AI-related capital expenditures could reach 3-4 times current levels to match the railroad boom's share of economic output. Like railroads, AI is transforming the economy as well. The difference is speed and scope: while railroads took decades to reshape economies, AI adoption is accelerating in years, not generations, and is impacting nearly every sector simultaneously.

In 2025 alone, four US tech giants – Alphabet (Google), Amazon, Meta (Facebook), and Microsoft – are expected to invest around 321 billion USD in AI infrastructure and related projects committed in a



single year. That's roughly half of Germany's five-year total spending plan which was recently announced by politicians along with the leading German companies. This doesn't even account for other major US players like chipmakers, cloud providers, and AI startups that are also pouring billions into this rapidly expanding sector. Alphabet alone recently increased its planned AI spending by 10 billion USD, bringing its total to 85 billion USD² for the year, citing unprecedented demand for computing power.

This is not just another technological story. It's an economic transformation story, one that is reshaping the foundations of productivity across every major sector. AI is rapidly becoming the backbone of future economic growth, touching industries from healthcare and finance to manufacturing, logistics, and transportation. And right now, the US is building that backbone faster, bigger, and with more political support than anyone else globally.

Part of the reason for America's head start lies in Washington's willingness to throw its weight behind AI. At

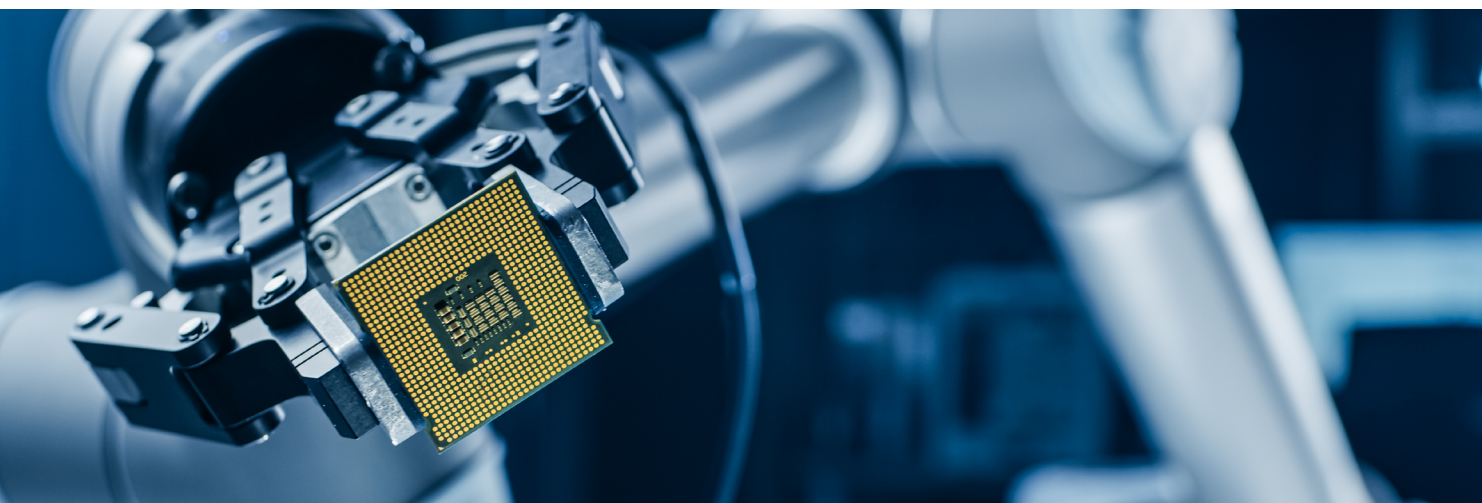
the Winning the AI Race³ summit, President Donald Trump unveiled an action plan aimed at ensuring US dominance in the AI era. The plan lays out a fully domestic AI supply chain, spanning advanced computer chips, secure energy sources, and the enormous data centers needed to train and deploy cutting-edge AI models. It calls for massive investment in the US power grid, fast-tracked approval processes for new data infrastructure, and a push for both nuclear power and renewable energy to avoid bottlenecks. Whether or not this is an exaggeration, the direction is unmistakable: AI investments are accelerating at a pace Europe has yet to match.

In parallel, Tesla has signed a **16.5 billion USD multi-year chip manufacturing agreement** with Samsung for its future AI6 chips, meant to power Grok, Optimus robots, and in-car systems—underlining long-term vertical integration in AI hardware⁴.

For investors looking for long-term growth opportunities, this shift represents a potentially

once-in-a-generation moment. Money is flowing not just into the big tech companies that dominate headlines, but into the entire ecosystem surrounding AI – from high-performance chip manufacturers like NVIDIA and AMD, to companies building data centers, to power utilities tasked with meeting surging electricity demand and water related cooling techniques. Beyond the technology sector itself, AI is poised to reshape manufacturing, logistics, medicine, and even agriculture, opening doors to entirely new industries and business models. Early investors in these areas could see returns reminiscent of those who got in early on the railroad boom or the rise of the internet in the 1990s.

Such concentrated capital expenditure often precedes long-term market shifts, creating opportunities for investors positioned early. For thematic investors, AI isn't just a tech story, it's a structural megatrend reshaping industries worldwide, offering multi-decade growth potential across multiple sectors.



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Sources:

- ¹ Robert Fogel 1964; Railroads and American Economic Growth
- ² Alphabet Investor Relations
- ³ The White House July 2025; White House Unveils America's AI Action Plan
- ⁴ Wall Street Journal 28th of July; Tesla, Samsung Sign \$16.5 Billion Deal to Make AI Chips

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